



An Impact of Trade on Economic Growth: A Case Study of China

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ABSTRACT

This study aims to look at the impact of trade on China's economic development. For this analysis we have taken Gross domestic product as dependent variable while trade, labor force, Domestic investment taken as independent variable. Time series data source is World Bank and its duration is 1990-2018. Results of Ordinary Least Square (OLS) show that DI, Trade and Lf have significantly positive impact on the GDP of China. Similarly, combined impact of DI*LF has significantly positive impact on the China's economy.

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Introduction China's connecting into the global economy has almost completely contributes to its continuous economic growth. Few industries with comparative advantages started to get a high level of expertise, and also China has fulfilled a rear growth rate of GDP, moreover an extremely large arrival of hard currency and raised in employment. Another essential point is that, the contribution of China in global trade has also become better in production of domestic industries and making progressive of technology. On other hand, huge imports of goods of machinery during 1990s had direct effect on production over the technological application included in them. In other words, due to the cause of "learning by doing" the dramatic increase became in the level of science and technology in China. As a result, research on international trade supplying to China's economic growth could provide as a differentiating case study suggest how a latecomer catches up with forerunners by increasing its participation on the global stage.(Sun & Heshmati, 2010)

Throughout the twentieth century, only those countries who are having high-income industrial, are not more than one-fifth of the world's population, have got the benefits of economic well-being. Although, China and India are seeing impressive levels of economic development and poverty elimination since 1980s — and getting it together, compare with these countries over one third of the world's population. The starting point of China and India as the main force in the global world economy has been one of the most important economic development of the past one fourth century.(Bosworth & Collins, 2008)

As well as, there may be the opportunity of feedback causes from economic growth to honesty to human capital accumulation and international trade. It is demonstrated that economic progress may include affects global trade extendable or openness to global trade. Economic growth may also affect human capital accumulation, which is a shape of investment and for the reason, more investment is predictable to rise economic progress (Mincer, 1996).

Therefore, the above opinions propose that a better able to understand of economic growth needed the analysis on the base of openness to global trade, human capital accumulation and economic growth. However, in this topic research is comparatively limited.(Tsen, 2006)

As the plan was implemented of its “reform and opening up” decision which were made in 1978, China has broken successfully along with the national monopoly of foreign trade and fulfilled noticeable progress in the liberalization of trade policy. The controls of direct administration of foreign trade have been seriously reduced, despite this trade has been organized increasingly in according to its comparative advantage. The foreign exchange reforms of China’s aim since 1978 to fulfilled more better for its currency exchange rate across a dual-exchange rate system and succeeded the depreciation of the Renminbi (RMB) as a result of encouraging exports and also the trade balance in the 1980s and the initial 1990s. The linkage of China’s two basic currency rates in the start of 1994 and the decontrol on enterprises of foreign investors in exchanging funds free at banks which were selected without agreement from the State Administration for Exchange Control (SAEC) early 1996 led finally to the absolute convertibility of RMB on current account transaction in the end of 1996.the foreign exchange system of China has been, since the mid-1980s, recorded as a more flexible management system.(Zhang, 1999)

Real GDP of China grew at an average of annual rate 10 per cent in between 1980 and 1996, on other side the share of GDP of its industry remained at the same level of near about higher than 40 per cent. In the same time, the total export products and the exports of manufacturing of the country speed-up (in US dollar) with the rate of 14 and 18 per cent, respectively. It was similar between the trends of output and foreign trade that raise to the question related to the causal link, if any, between these.(Lo & Chan, 1998)

The HO model is actually beneficial because it would give help to understand the important problems of international trade. According to HO model change of technology in the sector of non-traded -goods has a quite difficult effect, the reason is that factor prices might be determined completely in the traded economy. As it can be seen that the computer intervention reduces the requirements of labor in the sector of non-traded labor intensive services.(Leamer, 1995)

2 Literature review

Fringe exchange is characterized as the trading of merchandise and ventures across global land outskirts inside a span of up to 30 km. Studies on outskirt exchange are exceptionally restricted attributable to the trouble of recording fringe exchanges and their generally little scope. While outskirt exchange just records for a little extent of complete global exchange, it effects sly affects the monetary improvement of fringe districts and assumes a huge job in the local joining of inland zones.

Alam, Li, and Baig (2019) examines the impact of CPEC on exchange terms of transport’s cost and travel time. Also, the examination thinks about the current courses and the new CPEC way.The investigate technique comprises of subjective and engaging factual strategies. The factors (transport’ cost and travel time) are determined and looked at for both the current course and new CPEC way.The consequences display that cost of transport for 40-foot holder among Kashgar and goal ports in the Middle East is diminished by nearby \$1450 dollars and for goal ports in Europe is diminished by \$1350 dollars. Moreover, time of travel is diminished by 21 to 24 days for goal ports in the Middle East and 21 days for goal ports in Europe.The good ways from Kashgar to goal ports in theMiddle East and Europe is diminished by 11,000 to 13,000 km.

Levitt, Saaby, and Sørensen (2019) the impacts of China's exchange progression, post passage into the World

Trade Organization (WTO), on the ozone depleting substance (GHG) outflows of its exchanging accomplices. Utilizing correlative estimators we build up that China's changed exchange effectsly affected the GHG discharges of its exchanging accomplices. Expanded introduction to Chinese fares expanded the development of consumptionbased emanations while lessening creation based outflow. The expansion in utilization based emanations was bigger than the decline underway discharges. Utilization outflows expanded both by a scale impact (utilization expanded) and a structure effect (consumption turned out to be more emanations concentrated). Bloom, Draca, and Van Reenen (2016) Look at the effect of Chinese import rivalry on wide proportions of specialized change—protecting, IT, and TFP—utilizing new board information across twelve European nations from 1996 to 2007. Specifically, we build up that the supreme volume of advancement increments inside the organizations generally influenced by Chinese imports in their yield markets. We right for endogeneity utilizing the evacuation of item explicit amounts next China's arrival into the World Trade Organization in 2001. Rising Chinese import rivalry likewise prompted falls in business and the portion of incompetent specialists.

Faber (2014) investigated the misuse of China's National Trunk Highway System as a huge scope normal trial to add to our comprehension of this inquiry. The system was intended to associate common capitals and urban areas with a urban populace over 500,000. As a reaction, countless little fringe regions were associated with huge metropolitan agglomerations. To address non-irregular course positions in transit between focused city hubs, the study suggest an active variable technique dependent on the development of smallest cost way crossing tree networks. This impact gives off an impression of being driven by a noteworthy decrease in mechanical yield development. Extra outcomes present proof on the side of an exchange based network the light of deteriorating exchange costs among fringe and city locales.

Ge, He, Jiang, and Yin (2014) Despite the fact that it is a significant structure square of local joining, almost no examination has researched fringe exchange between neighboring nations. This paper fills this hole by looking at the examples and determinants of China's fringe exchange with its neighboring nations. Initial, disaggregated, firm-item level exchange information is utilized to give a nitty gritty outline of fringe exchange development and elements. The paper shows that exchange progression has fundamentally urged new firms to enter the fare advertise, and new private firms represent most of the development in fringe sends out and the move toward increasingly advanced items. Second, a gravity model is utilized to examine the determinants of fringe exchange. The outcomes recommend that multilateral and territorial mix; advertise size and institutional quality assume significant jobs in advancing fringe exchange.

Shahbaz, Khan, and Tahir (2013) explored the connection between vitality usage and financial development by fusing money associated development, general exchange and investment as significant elements of formation work if here should be an existence of China over the time of 1971–2011. The ARDL limits testing way to deal with cointegration was used to analyze since quite a while ago run association among the arrangement while stationarity properties of the factors was tried by smearing auxiliary break test. Exact proof affirmed since quite a while ago run association among the factors. The outcomes indicated that vitality use, budgetary advancement, capital, fares, imports and universal exchange have positive effect on monetary growth. There is likewise bidirectional causality exists among capital and vitality request, money related improvement and financial development and, worldwide exchange and financial development.

Marelli and Signorelli (2011) assessed some econometric relations between financial development and exchange/transparency, with the expansion of control factors, (for example, the gross fixed capital development). We first used a board knowledge model for both nations to be tested for fixed impacts; to check the causality of turnaround; we reassessed the concept of fixed impacts through 2SLS (for specific instrumental variables being incorporated). The effect of our curiosity variables-Openness and FDI-on monetary growth (regarding GDP per

capita) remains optimistic and factually remarkable in all determinations, which affirms our findings when we consider such variables as endogenous influences.

Shui and Harriss (2006) analyzed the impact of US–China exchange on national and worldwide discharges of carbon dioxide (CO₂). The underlying discoveries uncover that during 1997–2003: (1) US CO₂ outflows would have expanded from 3% to 6% if the products trade in from China had been delivered in the US, (2) About 7%–14% of China's present CO₂ discharges were a consequence of delivering sends out for US shoppers, and (3) US–China exchange has expanded worldwide CO₂ emanations by an expected 720 million metric tons.

Felloni, Gilbert, Wahl, and Wandschneider (2003) In the course of current years, the development of China's horticultural economy has been uncommon. Nonetheless, it appears to be improbable that China will keep up independence in grains by 2005 without significant mediation. We build up a CGE model to evaluate the alternatives accessible to Chinese approach creators. We look at the government assistance impacts of import duties and household support, and investigate the capability of biotechnology as a way to accomplish independence through upgrades in farming efficiency. Our outcomes show that the value intercessions that would be required to keep up China's ideal independence proportions are significant, and are probably not going to be good with WTO promotion. The efficiency upgrades required are likewise noteworthy, and likely past the present capability of biotechnology.

Liu, Burrige, and Sinclair (2002) examined at the overall level the causal relations between trade , financial growth and internal remote direct speculation (FDI) in China. The characteristics of quarterly details in mixing and cointegrating was studied. In a cointegration method, in which this paper trends bi-directional causality between financial growth, FDI and fares, relations between production, fares, imports and FDI have been established since quite a while ago. Monetary growth, taxes and FDI provide all the responsibilities under the open-entry strategy to be widely improved.

Rauch and Trindade (2002) investigated ethnic Chinese schemes, backed by ethnic Chinese demographic shares, extended the mutual trade more for different products than for homogeneous ones. In fact, this implies industry, interpersonal organisations have an remarkable quantitative influence on universal trade by helping to manage space attributes with buyers and retailers, considering their impact by enforcing network prohibitions that dissuade astute behavior. Among trades among nations with ethnic Chinese population shares at the winning rates in Southeast Asia, the lowest average typical rise in two-sided separate trade products attributable to ethnic Chinese structures would be about 60%.

Shan and Wilson (2001) This examination researches the idea of causal relationship, assuming any, between universal the travel industry and worldwide exchange – owes utilizing the instance of China. The investigation used the Granger no-causality system created by Toda and Yamamoto in a vector autoregression (VAR) model, and endeavors to expand past the travel industry estimating contemplates, with regards to visitor request work, by recognizing the bearing of the endogeneity between traveler travel and worldwide exchange. Discoveries demonstrate a two-way Granger causality between worldwide travel and universal exchange and consequently infer that exchange – owes do interface with the travel industry on account of China.

3 Methodology

In this model we used Heckscher-Ohlin (HO) model. The most important element which would be introduces home bias of some form. Since many decades the Gravity models are being used to show the clear picture of the aspects of distance trading. Still, we are trying to build international models of trading that give us schizophrenic assumptions that both countries are far and even near without limit. Actually, the long-distance cost of commerce

is having two important effects on trade. Those countries which are having vast geographic area have less ratio of trade to GDP because they are having large economic area of external border. The countries which are on long distance from marketplaces are bound to utilize their home productions and they would try to specialize in those products whom they want to trade from other countries.(Leamer, 1995)

Trade gives us chance to increase the labor supply. Countries which are geographically large may have low trade ratio with GDP because they are having much economic production facilities.

Time series data was used for the era of 1990-2018 for China by applying the econometric techniques to analyze that how much trade, domestic investment and labor force have impact on GDP to attract the trade in the country. Econometric techniques are Correlation Analysis, Multiple Regression Model.

Model of the Study

$$GDP = \alpha_0 + \alpha_1 T + \alpha_2 DI + \alpha_3 LF + \alpha_4 DI*LF + \varepsilon$$

Where: GDP=Gross Domestic Product

T = Trade

DI= Domestic Investment

LF= Labor Force ε

=Error Term

Table: Variables Measurement

Dependent Variable	
Gross Domestic Product	Gross savings are calculated as gross national income less total consumption, plus net transfers.
Independent Variables	
Trade	Trade is the sum of exports and imports of goods and services measured as a share of gross domestic product.
Domestic Investment	Gross domestic investment consists of outlays on additions to the fixed assets of the economy plus net changes in the level of inventories.
Labor Force	Labor force participation rate is the proportion of the population ages 15 and older that is economically active: all people who supply labor for the production of goods and services during a specified period.

Source: World Bank

4 Results

The correlation matrix is shows the statistical link between the variables and that link may be negative or positive. If one variable is decreasing and other variable is increasing that show variables has negative association. If both variables are decreasing or increasing that show variables has positive association.

Table: 1 Correlation Matrix

	GDP	TRADE	DI	LF
GDP	1			
TRADE	0.816128	1		
DI	0.998481	0.801417988	1	
LF	0.933946	0.81106217	0.926933	1

Source: Software E-Views 9

GDP is positively correlated with trade exhibiting correlation value of 0.81612. Similarly, GDP is also positively correlated with DI and LF. Trade is positively correlated with DI and LF. DI is also positively correlated with LF. LF is positively correlated with DI.

Table: 2 Auto Correlation**Breusch-Godfrey Serial Correlation LM Test:**

F-statistic	11.66093	P. Value	0.000011
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Source: Software E-Views 9

Results of the table 2 show that auto correlation is exist in the data of the current study because the p-value is less than 5%.

Table: 3 Heteroskedasticity Test

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	0.497841	P-value	0.6871
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Source: Software E-Views 9

Results of the table 3 show that heteroskedasticity not exist in the data of the current study because the p-value is greater than 5%.

Table: 4 Main Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DI	0.215882	0.077363	2.790522	0.0104
LF	0.231926	0.01898	12.21979	0
TRADE	0.026987	0.002476	10.90134	0
DI*LF	0.085866	0.022486	3.818703	0.0009

GDP(-1)	0.444208	0.038112	11.65541	0
R-squared	0.99943		Durbin-Watson stat	1.104974
Adjusted Rsquared	0.999331			

Source: Software E-Views 9

Note: Trade, DI (domestic investment), LF (labor force)

Table 4 shows the main results of this study. The p-value of the DI is 0.0104 and its coefficient value is 0.215882 that show DI is statistically significant and has positive impact on economic growth of the China. The p-value of the LF is 0 and its coefficient value is 0.231926 that show Lf is statistically significant and has positive effect on economic growth of China. The p-value trade is 0 and its coefficient value is 0.026987 that show trade has statistically significant and has positive impact on Chines economic growth. R-squared show that 99% of GDP dependent variable is described by the independent variables which are Trade, DI and LF in the recent model. Value of Durbin- Watson stat is around 2.

5 Conclusion

This study tries to observe the association among the trade and the economic development of the China. The results of the paper show by applying OLS (Ordinary Least Square) method for the period 1990-2018, trade is statistically significant and has positive effect on economy of the China. Similarly, domestic investment has positive effect on the GDP of China. And also, labor force has positive effect on the economy of the China. Trade plays a key role in development of China.

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